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EDITSPEC: SYSTEM MANUAL VOLUME V CONVERSION AND
EXTENSION REVISION 1(U) CONSTRUCTION ENGINEERING
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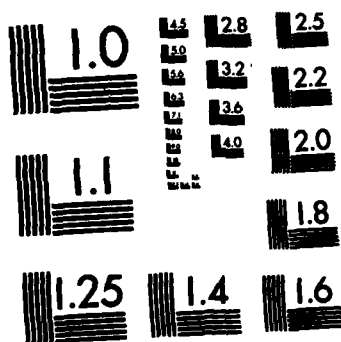
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EDITSPEC SYSTEMS MANUAL
VOLUME V: CONVERSION AND EXTENSION

by
E. S. Neely

ORIGINAL (Revision 0 - October 1978)
(Revision 1 - November 1979)

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PREFACE

The purpose of the EDITSPEC system reports is to provide complete documentation to all personnel involved with the EDITSPEC system. Such personnel include managers, specification writers, typists, computer systems analysts, and computer programmers. Each personnel group requires different documentation. The reports required for each group and the order in which they should be read are shown in the table below.

Accession For	
NTIC GRA&I	<input checked="" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By	
Distribution/	
Availability Codes	
Dist	Avail and/or Special
A	



REPORTS REQUIRED AND REVIEW ORDER

PERSONNEL	MANA- GERS	SPEC WRITERS	TYPISTS	SYSTEM ANALYST	PROGRAM- MER
REPORTS					
1. Const. Spec. Prep. within EDITSPEC system	1	1	1	1	1
2. Preparing a Guide Spec for EDITSPEC		4			
3. TRAINING COURSE MANUALS					
a. instructor					
b. introduction	2	2	2	2	2
c. spec writer		3		3	
d. internal commands			3		
e. edit commands			4		
f. system commands			5		
4. USERS MANUAL		Reference	2	2	2
5. SYSTEM OVER- VIEW				3	3
6. SYSTEM DESIGN CONCEPTS				4	4
7. TABLE HANDLER				5	5
8. DATA HANDLER				6	6
9. CONVERSION and EXTENSION				2	7
10. Project Managers Procedures				8	
11. Operation & Maintenance Procedures				9	

ABSTRACT

This report provides computer programmers with procedures for changing, extending, and converting the EDITSPEC system. Procedures to be used in contracting for computer services are detailed. Program and data conversion procedures are described as are testing procedures to insure that the conversion has been performed correctly.

FOREWORD

This investigation was performed for the Directorate of Military Construction, Office of the Chief of Engineers (OCE), under Project 4A762731AT41, "Design, Construction, and Operation and Maintenance Technology for Military Facilities"; Task T1, "Development of Automated Procedures for Military Construction"; Work Unit 009, "Computer-Based Specifications." The applicable QCR is 1.10.001. The OCE Technical Monitor was William Darnell.

The study was performed by the Management Systems Branch (Dr. O. E. Rood, Jr., Chief), Facility Acquisition and Construction Division (Mr. E. A. Lotz, Chief), U.S. Army Construction Engineering Research Laboratory (CERL).

COL Louis J. Circeo is Commander and Director of CERL and Dr. L. R. Shaffer is Technical Director.

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EDITSPEC SYSTEMS MANUAL
VOLUME V: CONVERSION AND EXTENSION

1 PROGRAM DOCUMENTATION TAPES

To provide a complete record of all computer programs ever written for the EDITSPEC system, a series of documentation tapes has been preserved. All tapes are unlabeled, written at a density of 800 bpi, and blocked with 800 characters per block. Each record is 80 characters long.

The programs are listed in alphabetical order by functional area, one program per file. The FORTRAN version of each program is given first, followed by the assembly language program written to replace the FORTRAN program. Assembly language and rewritten FORTRAN programs are given in chronological order. The computer-system and operating-system version are recorded in each assembly program in the first few comment cards.

All assembly programs have been saved so that EDITSPEC can be converted for use on a new computer system using a previous assembly language program with minimal resource expenditures.

Each program has been stored in a separate tape file. The first tape file contains a sequential index for each EDITSPEC program file.

The format for this index is shown below:

FILE NO.	PROGRAM NAME	SOURCE LANGUAGE	DATE WRITTEN	LAST DATE MODIFIED	
3--10	13--20	23--40	43--50	53--60	Card Columns
Right	Left	Left	DD/MM/YY	DD/MM/YY	Data Form
Justified	Justified	Justified			

For conversion of the data-handler and table-handler programs see Volumes no. III and IV.

2 CHANGES TO THE EDITSPEC SYSTEM PROGRAMS

As new functions are incorporated into the EDITSPEC system, the steps below should be rigorously followed. Executing these steps will insure that the changes are performed correctly and are completely documented. See the programmers manual for added information.

STEP 1: - Write a FORTRAN program well documented with comment statements. Follow the standard documentation procedures below. If an existing program is being modified, change the FORTRAN program before changing the assembly programs. Store the changed FORTRAN program in correct chronological order. The following information should be entered:

Program name: Enter the name as in the first line of the function or subroutine with arguments.

Function: Provide a brief description of the function of the program.

Author: Give the author's name and the date the program was first written.

Modifications: List the author, date and brief statement of the reason for the change(s).

Language: Indicate the programming language used.

Calling Sequence: Describe the arguments and the function result.

Routines Called: List the subroutines and functions called by the program.

Tasks or Modules: Identify the tasks or modules containing this routine.

Variables: Describe all variables used in the program. COMMON variables will generally be described in a "main" program, referenced in this section. The structure of arrays and meaning of variables should be fully described.

Program Logic: Provide a detailed description of both the algorithm(s) used and the flow of the program. The comment statements that provide this portion of the documentation will normally be scattered throughout the program in complete English sentences.

STEP 2: Change the last data modified on the EDITSPEC system tape file index.

STEP 3: Change the FORTRAN source listing on the documentation tapes.

STEP 4: Write the assembly programs, if required.

STEP 5: If required, change the last data modified on the EDITSPEC system tape file index.

STEP 6: Change the assembler listing on the documentation tapes.

STEP 7: Change the system integration test routines to completely test the new feature.

STEP 8: Execute the entire system integration test routine package and replace the results on the documentation tapes.

STEP 9: Revise this and other reports if required. Document all revisions on the list of revisions to this document located at the beginning of the reports.

STEP 10: Revise all calling programs as required by the change in the program modified by repeating steps one through ten.

3 CONTRACTING FOR COMPUTER SERVICES

Starting the Process

It is the policy of the Federal government to periodically rebid for computer services. Preparation for the rebidding must start at least 12 months before the current computer service contract expires.

Activities to be Performed

The milestones and activities to be performed in converting to a new computer system are shown in Figure 1.

The first step is to review the previous documentation approved by HQDA. This documentation includes the Management Information System Economic Analysis (MISEA), Appendix N, and the scope of work for the current contract. Several meetings will be required to coordinate the activities of the specifications, systems-support, and procurement sections. A new set of documents showing the anticipated work load for the next contract period must be produced.

The second activity is the review of the documentation by the Technical Monitor (TM), HQDA (DAEN-MCE-S), and the Engineering Division Management. The TM's review would normally take one week. A coordination meeting and rewriting would occupy a second week. Final review and approval by the TM would take place during the third week, and the approval of the Engineering Division Management would be obtained during the fourth week.

The documentation would then be sent from Engineering Division to OPRS for review and revision. The first week would be used for review and the second for a review conference. The rewriting would be performed during the third week, after which OPRS would approve the documentation and send it to Engineer Information & Data Systems Office (EIDSO).

The EIDSO review process would follow the same pattern as the OPRS review process.

The DMIS review is more lengthy. AR 18-1 requires a minimum of 60 days for review. The documents are reviewed by several sections in sequence. The Army Audit Agency then reviews the MISEA.

It is very difficult to obtain the required approval to award a contract within 60 days, so extra time should be allowed for slip-page.

Once final approval has been obtained, the bid package can be finalized and sent to the printer.

A preinvitation letter to prospective bidders can be helpful in reducing the number of prospective bidders.

The bidders should be given a minimum of 90 days to prepare and submit their bids, as bid preparation involves a great deal of work. The bidder must request a bid package and wait to receive it, a process which takes about two weeks. The bidder must then read the documentation provided, consuming another two weeks. It will require about four weeks for bidder to convert and load the system onto his computer. A system's integration test must be conducted during the following week. The benchmark test will take another two weeks to complete, and two weeks should be allowed for preparing the final bid.

The Government should allow at least 3 weeks for reviewing the bids and awarding a contract. The Government must then coordinate the transfer between the current system and the new system, after which the data would then be moved to the new computer.

Since activities rarely go according to schedule, a grace period must be provided before the current computer contract expires. At a bare minimum, an extra month should be allowed, after which the EDITSPEC system would be completely operational on the new computer.

After the transfer is complete, a summary report should be written recording the problems encountered so that they can be considered and avoided in future conversions. This report should be modified as required to reflect better approaches to the activities.

Previous Contracts

One copy of each contract awarded should be placed in Appendix B of this volume, which will serve as a reference appendix for the preparation of future contracts.

4 PROGRAM CONVERSION

The EDITSPEC system has been written in such a way as to minimize the time required to convert from one computer to another. All conversion instructions are presented as comment statements within the code of the subroutines given in Appendix A. A standard description of the conversion process for each subroutine that must be altered is given in the appendix which should be reproduced and used as a guide for conversion.

The programmer performing the conversion should carefully follow the instructions given in the comments and in Appendix A.

The FORTRAN programs for several subroutines have been rewritten in assembly language to improve execution speeds. The original FORTRAN programs can be used for the initial loading of the EDITSPEC system. As new assembly language routines are completed, they can then replace the initial FORTRAN code. Both the FORTRAN and IBM BAL codes are included on the documentation tapes.

The following programs should be rewritten in assembly language for the host computer:

UNLOK
LOCK
MC2ED
RCNV2
RCNVR
MCMP
CLOCK
NCMP
EX2UN
TRANS
ICOPY
PACK
UNPAK

After all programs have been written in assembly language, the new programs should be added to the documentation tapes in the location immediately after the last assembler or FORTRAN version of the basic program. Previous programs in assembler languages should not be removed from the documentation tapes. This documentation procedure will make it possible to load the EDITSPEC system in a relatively short time and with minimal resource onto a new computer system which uses an assembler that has been used at some previous time in the history of EDITSPEC.

5 OVERLAY STRUCTURE

The complete EDITSPEC computer code occupies over 2,500^k bytes of computer storage. The system can be overlayed to reduce the core requirements to under 800^k bytes. The overlay structure used is shown in Figure 2.

6 SYSTEM INTEGRATION TEST

The System Integration Test (SIT) is a test of the completed computer system conducted to insure that the system:

1. meets system objectives
2. is fully operational
3. is ready for operational testing
4. contains no unauthorized features.

The input for the SIT is contained on the tapes named CERLEDITSPEC.SIT. SYSTEM.INDATA. Each command in the EDITSPEC system has one SIT input file on this tape. Each file corresponds to one complete EDITSPEC session. All input tapes are unlabeled, written at a density of 800 bpi, and blocked at 800 characters per block.

The output from the SIT is contained on the tapes named CERL.ED-ITSPEC.SIT.SYSTEM.OUTDATA. Each command in the EDITSPEC system has one SIT output file on this tape. All output tapes are unlabeled, written at a density of 800 bpi, and blocked at 1330 characters per block. Each record is 133 characters long.

Six temporary disk files are required for program execution, designated as follows:

Name
CERL.EDITSPEC.A1SYSTEM
CERL.EDITSPEC.B1SYSTEM
CERL.EDITSPEC.A1SIT
CERL.EDITPSEC.B1SIT
CERL.EDITSPEC.A1DCMNTS
CERL.EDITSPEC.B1DCMNTS

The SIT should always be kept up to date. The SIT should be conducted to insure proper conversion of computer programs before actual benchmark tests are conducted.

7 BENCHMARK PROCEDURES

Introduction

The purpose of the benchmark tests is to simulate the actual working environment so that actual production costs can be estimated. The benchmark consists of four parts, each of which is described below. The instructions to the bidder for running the benchmark are given in the contract in Appendix B.

Initial System Loading

This part of the test will fully load the EDITSPEC system tables with data on users, supervisors, documents, accounts, and formats as they would be expected to exist during normal system operation. All document data sets must be referenced by one .new. command during this loading.

Test One

The first test loads and edits ten 25-page documents similar to an average OCE guide specification. Documents are named 10CECE220.01 through 10CECE200.10. The normal editing and printing commands are included with each document. This test is conducted by one EDITSPEC user under the bidder's normal computer system operating conditions.

Test Two

The second test loads and edits 55 documents, each 25 pages long, similar to a typical OCE guide specification. The documents are named 10CECE220.11 through 10CE220.65. The normal editing and print commands are included with each document. The test is conducted by 55 EDITSPEC users simultaneously under the bidders normal computer system operating conditions.

Comparison of Tests One and Two

Comparison of both time and charges for the processing of one document from test one and one document from test two will indicate the efficiency of the system when unloaded and when fully loaded with EDITSPEC users.

Test Three

This test simulates the total size of a typical project. One project named PRO1CE220. 02 is executed. This document consists of five pages copied from a guide specification and one page entered by the input command. The text is copied, entered, tested, and printed in the first edit cycle. Four edit cycles are performed using global replacement commands to simulate normal editing. A second printing of the entire project should be performed at the close of the fourth edit cycle. The results of this output should be multiplied by 50 to simulate the average 300-page specification.

Benchmark Test Performance

This benchmark test should be conducted every three months to verify that the performance of the contractor's system has not degraded nor have the charges changed.

8 DATA CONVERSION

Once the service contract has been awarded, the existing data must be converted to the new computer. The system data conversion process is shown in Figure 3. The conversion command is given in Appendix C.

FIGURE 1
COMPUTER SERVICES
CONTRACTING ACTIVITY
PLANNING SCHEDULE

MILESTONES

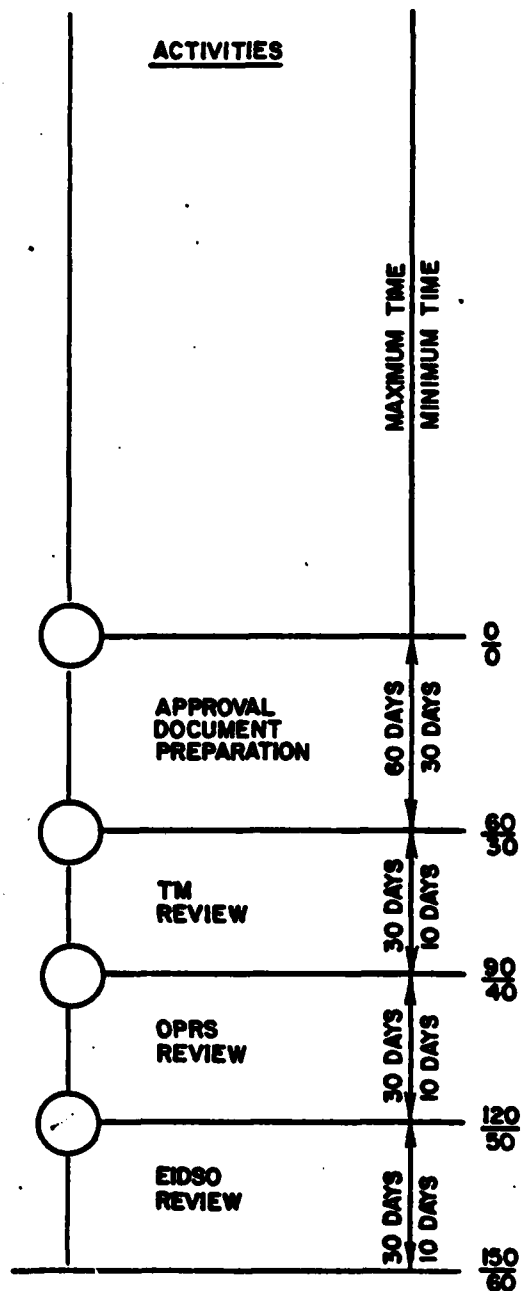
ACTIVITIES

START OF PROCESS

DOCUMENTS TO ENGINEERING DIVISION
CORPS OF ENGINEERS

DOCUMENTS TO OPRS

DOCUMENTS TO EIDSO



MILESTONES

DOCUMENTS TO DMIS

HQDA FINAL APPROVAL

FINAL BID PACKAGE COMPLETE

PREADVERTISMENT LETTER

ADVERTISE IN CBD

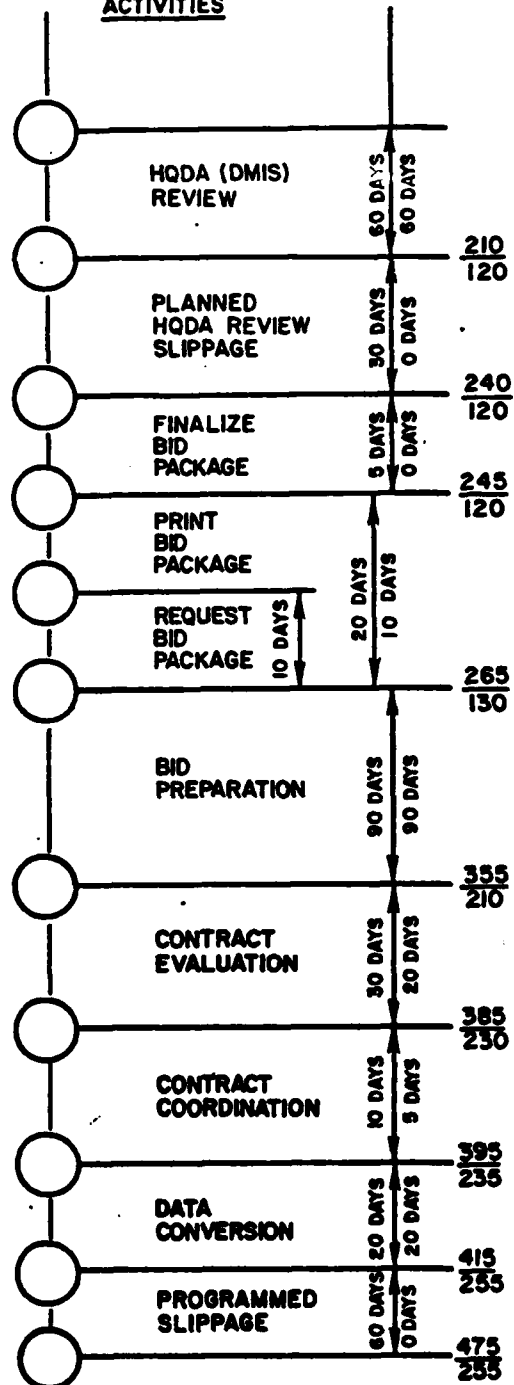
BID OPENING

CONTRACT AWARD

SIT & BM COMPLETED

FULLY OPERATIONAL NEW
COMPUTER SYSTEM

ACTIVITIES



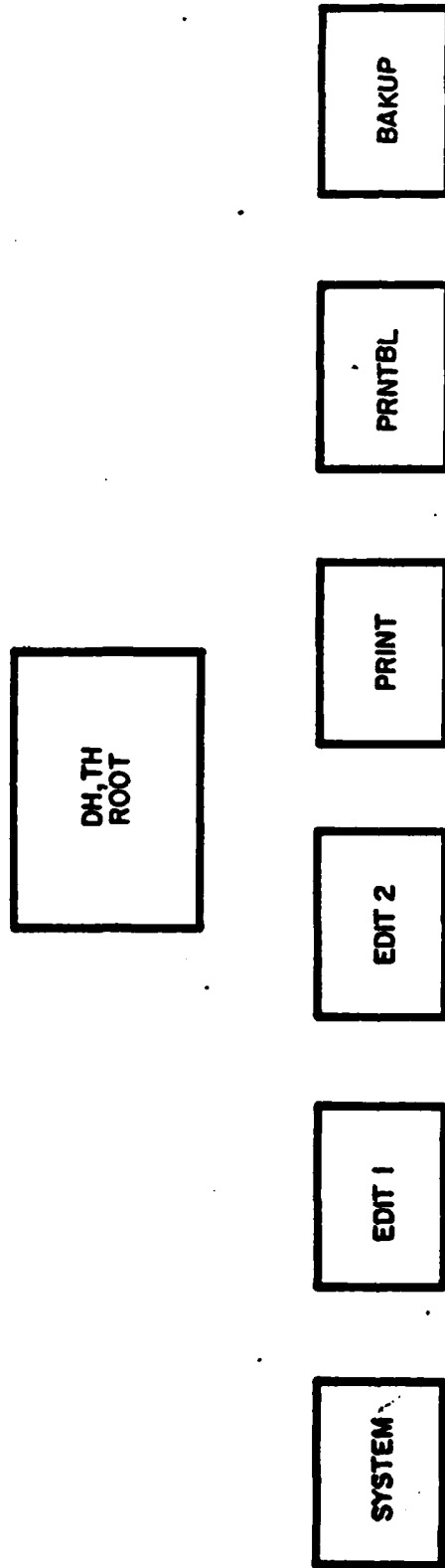


FIGURE 2 OVERLAY STRUCTURE

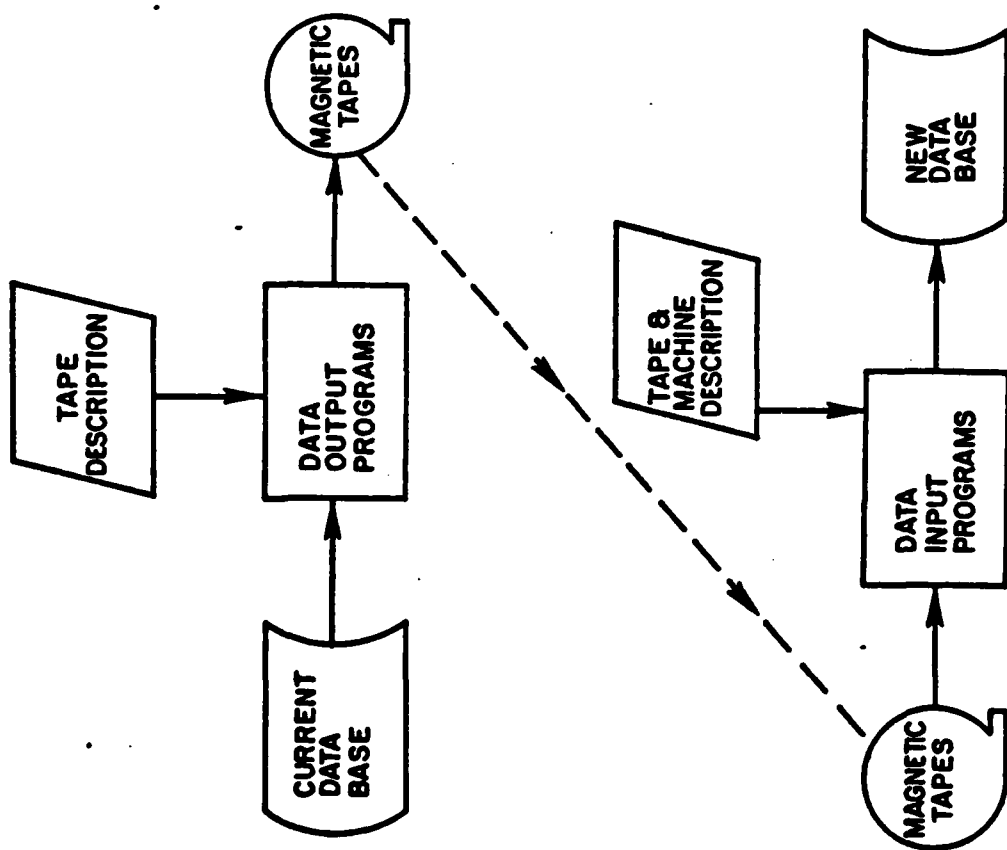


FIGURE 3 DATA CONVERSION

APPENDIX A

CONVERSION MANUAL

CONVERSION MANUAL

SUBROUTINE: CLOCK

A. NEW SYSTEM PARAMETERS REQUIRED: Entire routine must be rewritten in assembler language of new host computer system.

B. SUBROUTINE CONVERSION COMPLETED BY:

DATE: _____

CONVERSION MANUAL

SUBROUTINE: CMMNTR

CONVERSION ITEM: IRES (), DUMMY

NCRES

1. Locations in Text: ISN 24, 47, 48

2. Machine Dependence: Site of Array

3. Conversion Procedures: Determine the size of the
IRES Array by adding four to the number of resources reported
in the moni routine which is NCRES in this routine. Change the
dummy variable whenever used to the correct machine dependent array.

4. Conversion Completed and Tested by: _____

Date: _____

CONVERSION MANUAL

SUBROUTINE: CMLIST

Cap 6 How . CONVERSION ITEM: IRESN, IAUG, ISUM

1. Locations in Text: _____

2. Machine Dependence: IRESN is the total number of
entries written to tape/disk.

3. Conversion Procedures: Get IRESN equal to the total
number of words written to the disk by CMMNTR. IAUG & ISUM
must be dimensioned according to IRESN.

4. Conversion Completed and Tested by: _____

Date: _____

CONVERSION MANUAL

SUBROUTINE: CONV

- A. NEW SYSTEM PARAMETERS REQUIRED: Entire routine must be rewritten in assembler language of new host computer system (FORTRAN version of this routine is available for reference and/or provisional use.)

B. SUBROUTINE CONVERSION COMPLETED BY:

DATE: _____

CONVERSION MANUAL

SUBROUTINE: CONV1

- A. NEW SYSTEM PARAMETERS REQUIRED: Entire routine must be rewritten in assembler language of new host computer system (FORTRAN version of this routine is available for reference and/or provisional use.)

- B. SUBROUTINE CONVERSION COMPLETED BY:

_____ DATE: _____

CONVERSION MANUAL

SUBROUTINE: ENTER

A. NEW SYSTEM PARAMETERS REQUIRED: New format statement.

B. SUBROUTINE CONVERSION COMPLETED BY:

DATE:

CONVERSION MANUAL

SUBROUTINE: INPUT

A. NEW SYSTEM PARAMETERS REQUIRED: Format statement.

B. SUBROUTINE CONVERSION COMPLETED BY:

_____ DATE: _____

CONVERSION MANUAL

SUBROUTINE: LIST

A. NEW SYSTEM PARAMETERS REQUIRED: All alphanumeric variables with
word lengths greater than 4 characters per word.

All programs called by this routine must be converted.

B. SUBROUTINE CONVERSION COMPLETED BY:

DATE:

CONVERSION MANUAL

SUBROUTINE: LOCK

- A. NEW SYSTEM PARAMETERS REQUIRED: Entire routine must be rewritten
in assembler language of new host computer system.

- B. SUBROUTINE CONVERSION COMPLETED BY:

_____ DATE: _____

CONVERSION MANUAL

SUBROUTINE: LSTBL

A. NEW SYSTEM PARAMETERS REQUIRED: Format statements

All programs called from this routine must be changed.

B. SUBROUTINE CONVERSION COMPLETED BY:

DATE: _____

CONVERSION MANUAL

SUBROUTINE: MCMP

- A. NEW SYSTEM PARAMETERS REQUIRED: Entire routine must be rewritten
in assembler language of new host computer system.

- B. SUBROUTINE CONVERSION COMPLETED BY:

_____ DATE: _____

CONVERSION MANUAL

SUBROUTINE: NCMP

A. **NEW SYSTEM PARAMETERS REQUIRED:** Entire routine must be rewritten in assembler language of new host computer system.

B. SUBROUTINE CONVERSION COMPLETED BY:

DATE: _____

CONVERSION MANUAL

SUBROUTINE: PGHDR

A. NEW SYSTEM PARAMETERS REQUIRED: Variable format statements.

[illegible]

B. SUBROUTINE CONVERSION COMPLETED BY:

DATE: _____

CONVERSION MANUAL

SUBROUTINE: PRINT, PPRØ, PRTOC

- A. NEW SYSTEM PARAMETERS REQUIRED: DYNAMIC
ALLOCATION / DEALLOCATION OF
THE DATASET FOR THE USERS
.LOCAL 1200 BAUD TERMINAL IS
MACHINE DEPENDENT.

- B. SUBROUTINE CONVERSION COMPLETED BY:

DATE: _____

CONVERSION MANUAL

SUBROUTINE: PRBODY

A. NEW SYSTEM PARAMETERS REQUIRED: Format statements need conversion.

[illegible]

B. SUBROUTINE CONVERSION COMPLETED BY:

DATE: _____

CONVERSION MANUAL

SUBROUTINE: RCNVR

- A. NEW SYSTEM PARAMETERS REQUIRED: Entire routine must be rewritten in assembler language of new host computer system. (FORTRAN version of this routine is available for reference and/or provisional use.)

B. SUBROUTINE CONVERSION COMPLETED BY:

DATE: _____

CONVERSION MANUAL

SUBROUTINE: RCNV2

- A. NEW SYSTEM PARAMETERS REQUIRED: Entire routine must be rewritten
in assembler language of new host computer system.

- B. SUBROUTINE CONVERSION COMPLETED BY:

_____ DATE: _____

CONVERSION MANUAL

SUBROUTINE: TRANS

A. NEW SYSTEM PARAMETERS REQUIRED: Entire routine must be rewritten
in assembler language of new host computer system.

B. SUBROUTINE CONVERSION COMPLETED BY:

DATE:

CONVERSION MANUAL

SUBROUTINE: UNLOK

- A. NEW SYSTEM PARAMETERS REQUIRED: Entire routine must be rewritten
in assembler language of new host computer system.

- B. SUBROUTINE CONVERSION COMPLETED BY:

_____ DATE: _____

APPENDIX B

**PAST CONTRACTS
(To be added later)**

APPENDIX C

DATASET CONVERSION

DATA SET CONVERSION
DSCN

PURPOSE

This system command allows the user to create a machine-independent conversion tape (on a user-specified device) from an existing document dataset or the system dataset. This tape is used to transfer EDITSPEC data from one computer system to another.

GENERAL FORM

.DSCN_dataset name; unit number; control option.

where	<i>dataset name</i>	is a one to six character name of the dataset to be dumped to tape
	<i>unit number</i>	is the logical unit number of the tape drive where the conversion output is to be written
	<i>control option</i>	is a number between 0 and 3 that specifies the processing option for this conversion run

FIELD OPTIONS

FIELD	OPTIONS	DEFAULT
1. <i>dataset name</i>	name of an existing dataset, or empty field to indicate system dataset.	SYSTEM dataset.

DATA SET CONVERSION
DSCN

FIELD	OPTIONS	DEFAULT
2. <i>unit number</i>	any FORTRAN logical unit number assigned to an output device (valid range is 1 to 99).	unit 10
3. <i>control option</i>	a number between 0 and 3, to indicate processing mode (only affects document dataset conversions, ignored on system dataset conversion): 0-normal processing 1-special select processing (see below) 2-reset all documents on specified dataset to status 'available' from status 'converted and unavailable' 3-rebuild ISDDT table for <u>all</u> documents <u>in</u> EDITSPEC system	option 0 - normal processing

SPECIAL NOTES

1. This command, because of the extensive processing involved, should be issued only from batch mode.
2. Only the 'supreme supervisor' is permitted to issue this command. The 'supreme supervisor' is defined as the first user who logged into this EDITSPEC system at system initialization.

DATA SET CONVERSION
DSCN

3. The 'special select' processing option requires the preparation of additional 'directive records' to control the selection of documents for conversion. Since these directives are in a fixed format and not prompted for, use of this option is restricted to batch mode operation. The general format of a directive record is:

<u>Character Position</u>	<u>Information</u>
1-2	must be blank
3	directive type
4	must be blank
5-16	document name, left justified, padded on right with "@" characters
17	must be blank
18-23	new dataset name, left justified, padded on right with "@" characters
24-80	must be blank

Below is a brief description of the different directive types:

- Type 1: Move a specific document to the conversion tape. The document is located on the dataset specified by the "dataset name" field on the DSCN command, and is transferred in such a fashion that it will be restored to the dataset indicated by "new dataset name" on the target system receiving the conversion tape. After the document is copied to the conversion tape, the ISDDT table is marked in such a fashion to prohibit further editing or accessing to this document.
- Type 2: Mark a specific document as "converted" without actually moving the document.
- Type 3: Remove the "converted" mark from a specific document, thus allowing access to the document again.
- Type 4: Move all unmarked documents on the dataset specified on the DSCN command to tape, transferring them in such a way that they will be restored to dataset "new dataset name" on the target system. The document name field of this directive is ignored. All documents that are successfully copied to tape will be marked as "converted" (this directive is the equivalent of specifying control option 0 on the DSCN command).
- Type 5: End of directives flag.

DATA SET CONVERSION DSCN

As many directives as desired may follow the DSCN command, but there must be one and only one type 5 directive as the last directive issued. The directives are read from the principle input unit for the EDITSPEC system, and thus may not be located in text files that are executed indirectly by the EXEC command.

4. More detailed information about inter-system conversion procedures and internals can be found in the EDITSPEC SYSTEMS MANUAL VOLUME V: Conversion and Extension.

EXECUTION PROCEDURE

The dataset name is checked to make sure it specifies a valid dataset. The control option is decoded and, if necessary, additional selection directives are read from the command stream. Any tables to be copied (system or document) are formatted and written to the conversion tape (on the unit specified) as a sequence of special EDITSPEC commands to be executed on the target EDITSPEC system.

COMMAND VARIATIONS

Var. #1. .DSCN.

Example #1.

Command: .DSCN.

Action performed: A series of special EDITSPEC commands are written to unit 10. These commands, when executed on a new EDITSPEC system, will duplicate all system table information on the target system.

System and document datasets after: no change

Example #2.

System datasets before: System dataset is named 'SYSTEM'

Command: .DSCN_SYSTEM;31.

Action performed: The system tables are copied to tape as before, writing to logical unit number 31.

System and document datasets after: no change

DATA SET CONVERSION
DSCN

Var. #2. .DSCN_document dataset name.

Example #1.

Document datasets before:

DIRECTORY OF DOCUMENTS ON DATASET "DS1"	
DOC NAME	STATUS
DOCUMENTA	OK
DOCUMENTB	OK
DOCUMENTC	CONV
DOCUMENTD	OK

Command: .DSCN_DS1.

Action performed: All non-converted documents on dataset DS1 are individually formatted and written to unit 10. After each document is copied, its status is changed from 'OK' to 'CONV', restricting its access to prevent modification (note that in this example 'DOCUMENTC' is not processed).

Document datasets after:

DIRECTORY OF DOCUMENTS ON DATASET "DS1"	
DOC NAME	STATUS
DOCUMENTA	CONV
DOCUMENTB	CONV
DOCUMENTC	CONV
DOCUMENTD	CONV

Example #2.

Document datasets before: same as example #1

Command: .DSCN_DS1;25;0.

Action performed: Documents DOCUMENTA, DOCUMENTB, and DOCUMENTD are copied to unit 25. (Note that option 0 is explicitly stated, rather than implicitly by default.)

Document datasets after: same as example #1

DATA SET CONVERSION
DSCN

Var. #3. .DSCN_document dataset name;;1.

Example #1.

Document datasets before:

DIRECTORY OF DOCUMENTS ON DATASET "DS1"		
DOC NAME	STATUS	
DOCUMENTA	OK	
DOCUMENTB	OK	
DOCUMENTC		CONV
DOCUMENTD		OK
DOCUMENTE		CONV

Commands: .DSCN DS1;;1.
bb1bDOCUMENTA@@@bDS1000 (a)
bb1bDOCUMENTB@@@bDS2000 (b)
bb2bDOCUMENTD@@@b000000 (c)
bb5 (d)

Action performed: Processing option 1 is requested. Therefore a series of directives must follow the DSCN command, which itself must be issued from batch mode. The first directive (a) requests that 'DOCUMENTA' on dataset 'DS1' be copied to unit 10, and then marked as converted. The copy is performed in such a manner that 'DOCUMENTA' will be restored to dataset 'DS1' on the target EDITSPEC system. The second directive (b) requests the same operation be performed against 'DOCUMENTB', except that the copy will be done so that 'DOCUMENTB' will be restored to dataset 'DS2' on the target system. Directive (c) requests that 'DOCUMENTD' be changed from status 'OK' to status 'CONV', without actually copying the document to tape, thus making 'DOCUMENTD' inaccessible for editing. Directive (d) indicates that it is the last of the DSCN directives, and that the system should expect an EDITSPEC command as its next line of input.

Document datasets after:

DIRECTORY OF DOCUMENTS ON DATASET "DS1"		
DOC NAME	STATUS	
DOCUMENTA	CONV	
DOCUMENTB	CONV	
DOCUMENTC	CONV	
DOCUMENTD	CONV	
DOCUMENTE	CONV	

DATA SET CONVERSION
DSCN

Example #2.

Document datasets before: Same as example #1

Commands: .DSCN DS1;;1.
bb4bb5bbbbbbbbbbDS3@@@ (e)
bb3bDOCUMENTB@@@b@@@@@@ (f)
bb3bDOCUMENTC@@@b@@@@@@ (g)
bb5b (h)

Action performed: As in example #1, directive input is required. Directive (e) requests that all non-converted documents on 'DS1' be copied to unit 10, in such a way that they will be restored to dataset 'DS3'. Each document is marked as 'CONV' when it is copied. Directives (f) and (g) request that 'DOCUMENTB' and 'DOCUMENTC' be changed from status 'CONV' to status 'OK' in order to make them accessible for further editing. Directive (h) terminates conversion processing and returns to normal EDITSPEC processing.

Document datasets after:

DIRECTORY OF DOCUMENTS ON DATASET "DS1"	
DOC NAME	STATUS
DOCUMENTA	CONV
DOCUMENTB	OK
DOCUMENTC	OK
DOCUMENTD	CONV
DOCUMENTE	CONV

Var. #4. .DSCN_document dataset name;;2.

Example #1.

Document datasets before:

DIRECTORY OF DOCUMENTS ON DATASET "DS1"	
DOC NAME	STATUS
DOCUMENTA	CONV
DOCUMENTB	OK
DOCUMENTC	CONV

Command: .DSCN_DS1;;2.

DATA SET CONVERSION
DSCN

Action performed: All documents on dataset 'DS1' will be changed from status 'CONV' to status 'OK'. This permits subsequent editing and accessing of converted documents.

Document datasets after:

DIRECTOR OF DOCUMENTS ON DATASET "DS1"	
DOC NAME	STATUS
DOCUMENTA	OK
DOCUMENTB	OK
DOCUMENTC	OK

Var. #5. .DSCN_;;3.

Example #1.

Document and system datasets before: ISDDT table incorrect or corrupt, documents, 'DOCUMENTA' and 'DOCUMENTB' are on dataset 'DS1', document 'DOCUMENTX' is on dataset 'DS2'.

Command: .DSCN_;;3.

Action performed: The ISDDT table is deleted and entirely re-created, using information from the ISDIR table. All documents indexed by the ISDIR table are cataloged, regardless of which dataset they are stored on.

Document and system datasets after:

DIRECTORY OF DOCUMENTS ON DATASET "DS1"	
DOC NAME	STATUS
DOCUMENTA	OK
DOCUMENTB	OK

DIRECTORY OF DOCUMENTS ON DATASET "DS2"	
DOC NAME	STATUS
DOCUMENTX	OK

MESSAGES - All messages self-explanatory.

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16. Abstract (Limit: 200 words) The EDITSPEC System is an automated system designed to produce construction specifications from Corps of Engineers Guide Specifications. The System uses one central computer and a communications network to provide remote terminal access by Corps offices, nationwide to a central data base. This report provides computer programmers with procedures for changing, extending, and converting the EDITSPEC system. Procedures to be used in contracting for computer services are detailed. Program and data conversion procedures are described as are testing procedures to insure that the conversion has been performed correctly.			13. Type of Report & Period Covered
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